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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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AVAGO TECHNOLOGIES, INC. P.O. BOX 1920 DENVER, CO 80201-1920				
			EXAMINER CLEARY, THOMAS J	
			ART UNIT 2111	PAPER NUMBER

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/732,936

Applicant(s)

THERISOD ET AL.

Examiner

Thomas J. Cleary

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 3, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Number 6,279,067 to Callway et al. ("Callway").

3. In reference to Claim 1, Callway discloses a communications system, comprising: a transceiver (See Figure 1 'First VIP Slave' and Column 2 Lines 32-41), comprising: an interrupt request terminal (See Figure 1 'IRQ'); and a communication port (See Figure 1 'VIP Bus'); a host board (See Figure 1 'VIP Host'), comprising: an interrupt request line (See Figure 1 'VIP IRQ'); a communication bus (See Figure 1 'VIP Bus'); wherein the interrupt request line is coupled to the interrupt request terminal to communicate an interrupt request (See Figure 1 'VIP IRQ'), and the communication bus is coupled to the communication port to communicate data (See Figure 1 'VIP Bus').

4. In reference to Claim 2, Callway discloses the limitations as applied to Claim 1 above. Callway further discloses that the transceiver is a copper transceiver (See Column 2 Lines 32-41).

5. In reference to Claim 3, Callway discloses the limitations as applied to Claim 1 above. Callway further discloses another transceiver (See Figure 1 'Second VIP Slave' and Column 2 Lines 32-41), comprising: another interrupt request terminal (See Figure 1 'IRQ'); and another communication port (See Figure 1 'VIP Bus'); wherein the interrupt request line is further coupled to said another interrupt request terminal to communicate another interrupt request (See Figure 1 'VIP IRQ'), and the communication bus is further coupled to said another communication port to communicate other data (See Figure 1 'VIP Bus').

6. In reference to Claim 6, Callway discloses a communications system, comprising: a plurality of first transceivers (See Figure 1 'First VIP Slave' and 'Second VIP Slave') each comprising an interrupt request terminal (See Figure 1 'IRQ'); and a communication port (See Figure 1 'VIP Bus'); a host board (See Figure 1 'VIP Host'), comprising: an interrupt request line (See Figure 1 'VIP IRQ'); a communication bus (See Figure 1 'VIP Bus'); wherein the interrupt request line is coupled to the interrupt request terminal of each first transceiver to communicate an interrupt request (See Figure 1 'VIP IRQ'), and the communication bus is coupled to the communication port of each first transceiver to communicate data (See Figure 1 'VIP Bus').

7. In reference to Claim 7, Callway discloses the limitations as applied to Claim 6 above. Callway further discloses that the transceiver is a copper transceiver (See Column 2 Lines 32-41).

8. Claims 1, 2, 3, 6, 7, 10, 11, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Number 6,301,256 to Vasa ("Vasa").

9. In reference to Claim 1, Vasa discloses a communications system, comprising: a transceiver (See Figure 3 Number 104 and Figure 5) comprising: an interrupt request terminal (See Column 7 Lines 36-37); and a communication port (See Figure 4 Number 102A and Column 5 Lines 62-64); a host board (See Figure 3 Number 114), comprising: an interrupt request line (See Figure 4 Number 102G); a communication bus (See Figure 4 Number 102A); wherein the interrupt request line is coupled to the interrupt request terminal to communicate an interrupt request (See Column 7 Lines 36-37), and the communication bus is coupled to the communication port to communicate data (See Column 5 Lines 62-64).

10. In reference to Claim 2, Vasa discloses the limitations as applied to Claim 1 above. Vasa further discloses that the transceiver is a copper transceiver (See Column 4 Lines 28-30).

11. In reference to Claim 3, Vasa discloses the limitations as applied to Claim 1 above. Vasa further discloses another transceiver (See Figure 3 Number 106 and Figure 5), comprising: another interrupt request terminal (See Column 7 Lines 36-37); and another communication port (See Figure 4 Number 102A and Column 5 Lines 62-64); wherein the interrupt request line is further coupled to said another interrupt request terminal to communicate another interrupt request (See Column 7 Lines 36-37), and the communication bus is further coupled to said another communication port to communicate other data (See Column 5 Lines 62-64).

12. In reference to Claim 6, Vasa discloses a communications system, comprising: a plurality of first transceivers (See Figure 1 Numbers 104 and 106) each comprising an interrupt request terminal (See Column 7 Lines 36-37) and a communication port (See Figure 4 Number 102A and Column 5 Lines 62-64); a host board (See Figure 3 Number 114) comprising an interrupt request line (See Figure 4 Number 102G) and a communication bus (See Figure 4 Number 102A); wherein the interrupt request line is coupled to the interrupt request terminal of each first transceiver to communicate an interrupt request (See Column 7 Lines 36-37), and the communication bus is coupled to the communication port of each first transceiver to communicate data (See Column 5 Lines 62-64).

13. In reference to Claim 7, Vasa discloses the limitations as applied to Claim 6 above. Vasa further discloses that the transceiver is a copper transceiver (See Column 4 Lines 28-30).

14. In reference to Claim 10, Vasa discloses a method for communicating between transceivers and a host board, comprising: receiving an interrupt request from one of the transceivers (See Column 7 Lines 35-37); polling said one of the transceivers in response to the interrupt request (See Column 7 Lines 53-64).

15. In reference to Claim 11, Vasa discloses the limitations as applied to Claim 10 above. Vasa further discloses that the transceiver is a copper transceiver (See Column 4 Lines 28-30).

16. In reference to Claim 12, Vasa discloses the limitations as applied to Claim 10 above. Vasa further discloses that polling said one of the transceivers comprising polling a group of the transceivers that share one interrupt request line to the host board (See Column 7 Lines 53-64).

17. In reference to Claim 13, Vasa discloses the limitations as applied to Claim 11 above. Vasa further discloses handling an event that caused the interrupt request from said one of the transceivers (See Column 7 Line 64 – Column 8 Line 5).

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18. Claims 1, 2, 3, 6, 7, 10, 11, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Application Publication Number 2002/0029310 to Klein ("Klein").

19. In reference to Claim 1, Klein discloses a communications system, comprising: a transceiver (See Figure 1 Number 110 and Paragraph 5 Lines 1-9) comprising: an interrupt request terminal (See Paragraph 5 Lines 13-16); and a communication port (See Figure 1 Number 105); a host board (See Figure 1 Numbers 100 and 103), comprising: an interrupt request line (See Paragraph 5 Lines 13-16 and Paragraph 8); a communication bus (See Figure 1 Number 105); wherein the interrupt request line is coupled to the interrupt request terminal to communicate an interrupt request (See Paragraph 5 Lines 13-16 and Paragraph 8), and the communication bus is coupled to the communication port to communicate data (See Figure 1 Number 105).

20. In reference to Claim 2, Klein discloses the limitations as applied to Claim 1 above. Klein further discloses that the transceiver is a copper transceiver (See Paragraph 5 Lines 1-9).

21. In reference to Claim 3, Klein discloses the limitations as applied to Claim 1 above. Klein further discloses another transceiver (See Figure 1 Number 120 and Paragraph 5 Lines 1-9), comprising: another interrupt request terminal (See Paragraph 5 Lines 13-16); and another communication port (See Figure 1 Number 105); wherein



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the interrupt request line is further coupled to said another interrupt request terminal to communicate another interrupt request (See Paragraph 5 Lines 13-16 and Paragraph 8), and the communication bus is further coupled to said another communication port to communicate other data (See Figure 1 Number 105).

22. In reference to Claim 6, Klein discloses a communications system, comprising: a plurality of first transceivers (See Figure 1 Numbers 110 and 120) each comprising an interrupt request terminal (See Paragraph 5 Lines 13-16) and a communication port (See Figure 1 Number 105); a host board (See Figure 1 Numbers 100 and 103) comprising an interrupt request line (See Paragraph 5 Lines 13-16 and Paragraph 8) and a communication bus (See Figure 1 Number 105); wherein the interrupt request line is coupled to the interrupt request terminal of each first transceiver to communicate an interrupt request (See Paragraph 5 Lines 13-16 and Paragraph 8), and the communication bus is coupled to the communication port of each first transceiver to communicate data (See Figure 1 Number 105).

23. In reference to Claim 7, Klein discloses the limitations as applied to Claim 6 above. Klein further discloses that the transceiver is a copper transceiver (See Paragraph 5 Lines 1-9).

24. In reference to Claim 10, Klein discloses a method for communicating between transceivers and a host board, comprising: receiving an interrupt request from one of

the transceivers (See Paragraph 8); polling said one of the transceivers in response to the interrupt request (See Paragraph 8).

25. In reference to Claim 11, Klein discloses the limitations as applied to Claim 10 above. Klein further discloses that the transceiver is a copper transceiver (See Paragraph 5 Lines 1-9).

26. In reference to Claim 12, Klein discloses the limitations as applied to Claim 10 above. Klein further discloses that polling said one of the transceivers comprising polling a group of the transceivers that share one interrupt request line to the host board (See Paragraph 8).

27. In reference to Claim 13, Klein discloses the limitations as applied to Claim 11 above. Klein further discloses handling an event that caused the interrupt request from said one of the transceivers (See Paragraph 9).

28. Claims 1, 2, 3, 4, 6, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Number 5,475,846 to Moore ("Moore").

29. In reference to Claim 1, Moore discloses a communications system, comprising: a transceiver (See Figure 1 Number 15) comprising: an interrupt request terminal (See Figure 1 Number 32); and a communication port (See Figure 1 Number 55); a host

board (See Figure 1 Numbers 11 and 12), comprising: an interrupt request line (See Figure 1 'IRQ 3'); a communication bus (See Figure 1 Number 21); wherein the interrupt request line is coupled to the interrupt request terminal to communicate an interrupt request (See Figure 1 Number 31), and the communication bus is coupled to the communication port to communicate data (See Figure 1 Number 55).

30. In reference to Claim 2, Moore discloses the limitations as applied to Claim 1 above. Moore further discloses that the transceiver is a copper transceiver (See Column 1 Lines 48-64).

31. In reference to Claim 3, Moore discloses the limitations as applied to Claim 1 above. Moore further discloses another transceiver (See Figure 1 Number 18), comprising: another interrupt request terminal (See Figure 1 Number 33); and another communication port (See Figure 1 Number 57); wherein the interrupt request line is further coupled to said another interrupt request terminal to communicate another interrupt request (See Figure 1 Number 33), and the communication bus is further coupled to said another communication port to communicate other data (See Figure 1 Number 57).

32. In reference to Claim 4, Moore discloses the limitations as applied to Claim 1 above. Moore further discloses another transceiver (See Figure 1 Number 15), comprising: another interrupt request terminal (See Figure 1 Number 32); and another

communication port (See Figure 1 Number 55); wherein the host board further comprises another interrupt request line (See Figure 1 'IRQ 4'), said another interrupt request line being coupled to said another interrupt request terminal to communicate another interrupt request (See Figure 1 Number 32), and the communication bus being further coupled to said another communication port to communicate other data (See Figure 1 Number 55).

33. In reference to Claim 6, Moore discloses a communications system, comprising: a plurality of first transceivers (See Figure 1 Numbers 15 and 18) each comprising an interrupt request terminal (See Figure 1 Numbers 32 and 33) and a communication port (See Figure 1 Numbers 55 and 57); a host board (See Figure 1 Numbers 11 and 12) comprising an interrupt request line (See Figure 1 'IRQ 3') and a communication bus (See Figure 1 Number 21); wherein the interrupt request line is coupled to the interrupt request terminal of each first transceiver to communicate an interrupt request (See Figure 1 Numbers 32 and 33), and the communication bus is coupled to the communication port of each first transceiver to communicate data (See Figure 1 Numbers 55 and 57).

34. In reference to Claim 7, Moore discloses the limitations as applied to Claim 6 above. Moore further discloses that the transceiver is a copper transceiver (See Column 1 Lines 48-64).

35. In reference to Claim 8, Moore discloses the limitations as applied to Claim 6 above. Moore further discloses a plurality of second transceivers (See Figure 1 Numbers 14, 20, and 22) each comprising another interrupt request terminal (See Figure 1 Number 27 and 31) and another communication port (See Figure 1 Numbers 54 and 56); wherein the host board further comprises another interrupt request line (See Figure 1 'IRQ 4'), said another interrupt request line being coupled to said another interrupt request terminal of each second transceiver to communicate another interrupt request (See Figure 1 Numbers 27 and 31), and the communication bus being coupled to said another communication port of each second transceiver to communicate other data (See Figure 1 Numbers 54 and 56).

36. Claims 1, 2, 3, 5, 6, are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Number 5,101,199 to Suzuki ("Suzuki").

37. In reference to Claim 1, Suzuki discloses a communications system, comprising: a transceiver (See Figure 1 Number 30001) comprising: an interrupt request terminal (See Figure 4 'IRQ'); and a communication port (See Figure 4 'DB'); a host board (See Figure 1 Numbers 4, 5, 6, and 100), comprising: an interrupt request line (See Figures 2, 3, and 4 'IRQ'); a communication bus (See Figures 1-4 'DB'); wherein the interrupt request line is coupled to the interrupt request terminal to communicate an interrupt request (See Column 1 Lines 44-60 and Column 5 Lines 1-13), and the communication bus is coupled to the communication port to communicate data (See Figures 1-4 'DB').

38. In reference to Claim 2, Suzuki discloses the limitations as applied to Claim 1 above. Suzuki further discloses that the transceiver is a copper transceiver (See Column 4 Lines 46-50).

39. In reference to Claim 3, Suzuki discloses the limitations as applied to Claim 1 above. Suzuki further discloses another transceiver (See Figure 1 Number 30002), comprising: another interrupt request terminal (See Figure 4 'IRQ'); and another communication port (See Figure 4 'DB'); wherein the interrupt request line is further coupled to said another interrupt request terminal to communicate another interrupt request (See Column 1 Lines 44-60 and Column 5 Lines 1-13), and the communication bus is further coupled to said another communication port to communicate other data (See Figures 1-4 'DB').

40. In reference to Claim 5, Suzuki discloses the limitations as applied to Claim 1 above. Suzuki further discloses another transceiver (See Figure 1 Number 30129), comprising: another interrupt request terminal (See Figure 4 'IRQ'); and another communication port (See Figure 4 'DB'); wherein the host board further comprises another interrupt request line (See Figures 2, 3, and 4 'IRQ') and another communication bus (See Figures 1-4 'DB'), said another interrupt request line being coupled to said another interrupt request terminal to communicate another interrupt request (See Column 1 Lines 44-60 and Column 5 Lines 1-13), and said another

communication bus being coupled to said another communication port to communicate other data (See Figures 1-4 'DB').

41. In reference to Claim 6, Suzuki discloses a communications system, comprising: a plurality of first transceivers (See Figure 1 Numbers 30001-30128) each comprising an interrupt request terminal (See Figure 4 'IRQ') and a communication port (See Figure 4 'DB'); a host board (See Figures 2, 3, and 4 'IRQ') comprising an interrupt request line (See Figures 2, 3, and 4 'IRQ') and a communication bus (See Figures 1-4 'DB'); wherein the interrupt request line is coupled to the interrupt request terminal of each first transceiver to communicate an interrupt request (See Column 1 Lines 44-60 and Column 5 Lines 1-13), and the communication bus is coupled to the communication port of each first transceiver to communicate data (See Figures 1-4 'DB').

42. In reference to Claim 7, Suzuki discloses the limitations as applied to Claim 6 above. Suzuki further discloses that the transceiver is a copper transceiver (See Column 4 Lines 46-50).

43. In reference to Claim 9, Suzuki discloses the limitations as applied to Claim 6 above. Suzuki further discloses a plurality of second transceivers (See Figure 1 Numbers 30129-30255) each comprising another interrupt request terminal (See Figure 4 'IRQ') and another communication port (See Figure 4 'DB'); wherein the host board further comprises another interrupt request line (See Figures 2, 3, and 4 'IRQ') and

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another communication bus (See Figures 1-4 'DB'), said another interrupt request line being coupled to said another interrupt request terminal of each second transceiver to communicate another interrupt request (See Column 1 Lines 44-60 and Column 5 Lines 1-13), and the said another communication bus being coupled to said another communication port of each second transceiver to communicate other data (See Figures 1-4 'DB').

44. In reference to Claim 10, Suzuki discloses a method for communicating between transceivers and a host board, comprising: receiving an interrupt request from one of the transceivers (See Column 6 Lines 3-16); polling said one of the transceivers in response to the interrupt request (See Column 6 Line 59 – Column 8 Line 38).

45. In reference to Claim 11, Suzuki discloses the limitations as applied to Claim 10 above. Suzuki further discloses that the transceiver is a copper transceiver (See Column 4 Lines 46-50).

46. In reference to Claim 12, Suzuki discloses the limitations as applied to Claim 10 above. Suzuki further discloses that polling said one of the transceivers comprising polling a group of the transceivers that share one interrupt request line to the host board (See Figures 2, 3, and 4 'IRQ' and Column 6 Line 59 – Column 8 Line 38).



47. In reference to Claim 13, Suzuki discloses the limitations as applied to Claim 11 above. Suzuki further discloses handling an event that caused the interrupt request from said one of the transceivers (See Column 8 Lines 39-44).

### ***Specification***

48. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Bus interface for optical or copper transceiver devices".

### ***Conclusion***

49. The following prior art made of record and not relied upon is considered pertinent to Applicant's disclosure: US Patent Number 4,907,070 to Wesolowski; US Patent Number 6,401,156 to Mergard et al.; US Patent Number 4,885,763 to O'Brien et al.; US Patent Number 4,748,573 to Sarandrea et al.; and US Patent Number 6,006,301 to Tetrick. The Microsoft Press Computer Dictionary, Second Edition, provides a definition of a transceiver (See Page 394).

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Thomas J. Cleary whose telephone number is 571-272-

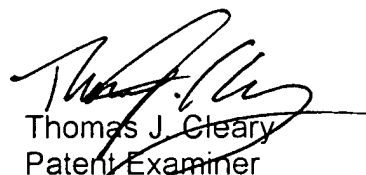
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3624. The Examiner can normally be reached on Monday-Thursday (7-3), Alt. Fridays (7-2).

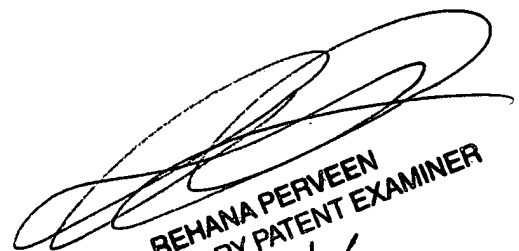
If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rehana Perveen can be reached on 571-272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJC



Thomas J. Cleary  
Patent Examiner  
Art Unit 2111



REHANA PERVEEN  
SUPERVISORY PATENT EXAMINER  
1/23/06